

Patent claims:

1 – 13 (canceled)

14. (new) A method for monitoring a control unit of an internal combustion engine, comprising:

monitoring a variable that characterizes the output of a lambda regulating system for a deviation from a predefined reference value; and

detecting an error by a control element determining the air mass in the cylinder as a function of the deviation that has been determined.

15. (new) The method according to claim 14, wherein the variable that characterizes the output parameter of a lambda regulation system is the output parameter.

16. (new) The method according to claim 15, wherein the deviation of the value of the output parameter is compared with a predefined desired value of the output parameter, the deviation is summed, and an error is detected if the summed deviation exceeds a predefined threshold value.

17. (new) The method according to claim 16, wherein that from the amount of the deviation, a further threshold value is deducted and this corrected deviation is summed in the case where the other threshold value is determined as a function of a load variable of the internal combustion engine.

18. (new) The method according to claim 17, wherein the load variable is the torque of the internal combustion engine and the rotational speed.

19. (new) The method according to claim 14, wherein the variable that characterizes the output parameter of the lambda regulation system depends on the derivation in time of the output parameter of the lambda regulation system.

20. (new) The method according to claim 14, wherein the variable that characterizes the output parameter of the lambda regulation system is a value of an air mass flow determined from the injection parameters in the cylinders of the internal combustion

engine.

21. (new) The method according to claim 20, wherein the value of the air mass flow determined from the injection parameters is determined as a function of a start of injection and an end of injection signal that are generated by the control unit.

22. (new) The method according to claim 21, wherein the deviation of the value of the air mass flow determined from the injection parameters is compared with an actual value of the air mass flow, the deviation is summed, and an error is detected if the summed deviation exceeds a predefined threshold value.

23. (new) The method according to claim 21, wherein a further threshold value is deducted from the amount of the deviation and this corrected deviation is then summed in the case the other threshold value is determined as a function of at least one of the load variables of the internal combustion engine.

24. (new) The method according to claim 22, wherein the load variable is both the torque of the internal combustion engine and the rotational speed.

25. (new) The method according to claim 14, wherein the variable that characterizes the output parameter of the lambda regulation system depends on a value of an air mass flow determined from the injection parameters in the cylinders of the internal combustion engine.

26. (new) A device for monitoring a control unit for an internal combustion engine, comprising:

a monitoring unit; and

a variable according to the monitoring unit that characterizes an output parameter of a lambda regulation system and is monitored for a deviation from a predefined threshold value and an error is detected by a control element determining the air mass in the cylinder as a function of the deviation that has been determined.